Claims

[c1]   A method of autonomic building and updating access control for referenced databases in documents sent via email by an originator to addressees, comprising: dynamically updating an access control list of said addressees for said originator of said email; tracking distribution routes of said documents in a repository; and providing a request to said originator and a response from said originator to any of said addressees for approving, altering, or rejecting the access of said referenced databases in said documents.

[c2]   The method of claim 1 further comprising building and accessing said document through usage of a common email system.

[c3]   The method of claim 1 comprising generating a database request table including identifying database servers, addressees, and types of access control.

[c4]   The method of claim 1 wherein providing said request to said originator includes having said originator receive said request in the form of an email that provides a

mechanism for approving, rejecting, or altering each access control list for each new addressee.

[c5] The method of claim 4 further comprising determining whether said addressees and access requests for each of said addressees match said access control list within each database.

[c6] The method of claim 5 further comprising updating said access control list to match said database transaction.

[c7] A method of autonomic building and updating access control of referenced databases on documents shared via email, comprising:

selecting a list of addressees in an email transmission to give access to said referenced databases;

selecting the type of access for said selected list of addressees;

constructing an email transaction to send to an originator, said email transaction including database and access requests for each of said addressees;

constructing database transactions to send to database servers;

sending said database transactions to said database servers;

matching said list of addressees and access requests to an access control list in said database;

sending said email transaction to said addressees;

requesting forwarding approval by said addressees of

said referenced databases from said originator;

transmitting a forwarding approval or rejection from said

originator to said addressee; and

tracing email forwarding for said originator.

[c8]   The method of claim 7 wherein selecting the type of access further comprises providing a menu for said originator of said email transmission.

[c9]   The method of claim 7 wherein constructing said email transaction to send to said originator further comprises sending said transaction to said originator for access approval or rejection of said referenced databases.

[c10]   The method of claim 7 wherein said database transactions comprise information from a database request table.

[c11]   The method of claim 7 further comprising having said database servers process database access requests.

[c12]   The method of claim 7 further comprising updating said access control list if said match is not complete.

[c13]   A program storage device readable by a machine, tangibly embodying a program of instructions executable by

the machine to perform method steps for building and updating access control for referenced databases in documents sent via email by an originator to addressees, said method steps comprising:

dynamically updating an access control list of said addressees for said originator of said email;

tracking distribution routes of said documents in a repository; and

providing a request to said originator and a response from said originator to any of said addressees for approving, altering, or rejecting the access of said referenced databases in said documents.

[c14] The program storage device of claim 13 further comprising the method step of tracking recipients of said email that are linked to said document.

[c15] The program storage device of claim 13 further comprising the method step of having said originator receive said request in the form of an email that provides a mechanism for approving, rejecting, or altering each access control list for each new addressee.

[c16] The program storage device of claim 13 further comprising the method step of building an appropriate database transaction for each database server.

[c17] A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps for building and updating access control for referenced databases in documents sent via email by an originator to addresses, said method steps comprising:

selecting a list of addressees in an email transmission to give access to said referenced databases;

selecting the type of access for said selected list of addressees;

constructing an email transaction to send to an originator, said email transaction including database and access requests for each of said addressees;

constructing database transactions to send to database servers;

sending said database transactions to said database servers;

matching said list of addressees and access requests to an access control list in said database;

sending said email transaction to said addressees;

requesting access approval by said addressees of said referenced databases from said originator;

transmitting a forwarding approval or rejection from said originator to said addressee; and

tracing email forwarding for said originator.

[c18] The program storage device of claim 17 further comprising the method step of sending said transaction to said originator for access approval or rejection.

[c19] The program storage device of claim 17 comprising the method step of administering access approval for viewing, editing, or administrating said referenced databases.

[c20] The method of claim 1 including deploying process software for updating access control for referenced databases in documents sent via email by an originator to addressees, said deployment comprising:

installing said process software on at least one server;

identifying server addresses for users accessing said process software on said at least one server;

installing a proxy server if needed;

sending said process software to said at least one server via a file transfer protocol, or sending a transaction to said at least one server containing said process software and receiving and copying said process software to said at least one server's file system;

accessing said process software on a user's client computer file system; and

executing said process software by said users.

[c21] The method of claim 20 wherein said step of installing said process software further comprises:

determining if programs will reside on said at least one server when said process software is executed;

identifying said at least one server that will execute said process software; and

transferring said process software to said at least one server's storage.

[c22] The method of claim 20 wherein said step of accessing said process software includes having said at least one server automatically copying said process software to each client computer, running an installation program at each client computer, and executing said installation program on said client computer.

[c23] The method of claim 20 wherein sending said process software to said users via email further comprises identifying said users and addresses of said client computers.

[c24] The method of claim 20 wherein said step of executing said process software by said users includes sending said process software to directories on said client computers.

[c25] The method of claim 20 wherein said step of accessing said process software comprises sending said process software to users via email.

[c26] The method of claim 1 including integrating process

software for updating access control for referenced databases in documents sent via email by an originator to addressees, said integration comprising:

determining if said process software will execute on at least one server;

identifying said at least one server address, including checking said at least one server for operating systems, applications, network operating systems, or version numbers for validation with said process software, and identifying any missing software applications that are required for integration;

updating said operating systems, said applications, or said network operating systems that are not validated for said process software, and providing any of said missing software applications required for said integration;

identifying client addresses and checking said client's computers for operating systems, applications, network operating systems, or version numbers for validation with said process software, and identifying any missing software applications that are required for integration;

updating said client's computers with said operating systems, said applications, or said network operating systems that are not validated for said process software, and providing any of said missing software applications required for said integration; and

installing said process software on said client's comput-

ers and said at least one server.

[c27] The method of claim 1 including on demand sharing of process software for updating access control for referenced databases in documents sent via email by an originator to addressees, said on demand sharing comprising:

creating a transaction containing unique customer identification, requested service type, and service parameters;

sending said transaction to at least one main server; querying said server's central processing unit capacity for adequate processing of said transaction; and allocating additional central processing unit capacity when additional capacity is needed to process said transaction, and adding said additional central processing unit capacity to said server, or checking environmental capacity for processing said transaction, including network bandwidth, processor memory, or storage, and allocating said environmental capacity as required.

[c28] The method of claim 27 further comprising recording usage measurements including network bandwidth, processor memory, storage, or said central processing unit cycles.

[c29] The method of claim 27 further comprising summing

said usage measurements, acquiring a multiplicative value of said usage measurements and unit costs, and recording said multiplicative value as an on demand charge to a requesting customer.

[c30]   The method of claim 27 further comprising posting said on demand charge on a web site if requested by said requesting customer, or sending said demand charge via email to said requesting customer's email address.

[c31]   The method of claim 27 further comprising charging said on demand charge to said requesting customer's account if an account exists and said requesting customer selects a charge account payment method.

[c32]   The method of claim 1 including deploying, accessing, and executing process software for updating access control for referenced databases in documents sent via email by an originator to addressees through a virtual private network, said method further comprising: determining if said virtual private network is required; checking for remote access of said virtual private network;
if said remote access does not exist, identifying a third party provider to provide secure, encrypted connections between a private network and remote users, identifying said remote users, and setting up a network access

server for downloading and installing desktop client
software for remotely accessing said virtual private net-
work;

accessing said process software;

transporting said process software to said remote user's
desktop; and

executing said process software on said remote user's
desktop.

[c33] The method of claim 32 further comprising:
determining if said virtual private network is available for
site-to-site access, or installing equipment required to
establish said site-to-site virtual private network, and
installing large scale encryption into said virtual private
network; and

accessing said process software on said site-to-site
configuration.

[c34] The method of claim 32 wherein said step of accessing
said process software further comprises dialing into said
network access server or attaching directly via a cable or
DSL modem into said network access server.